DOCUMENT RESUME

ED 194 934 CS 503 137

AUTHOR Siltanen, Susan A.
TITLE The Persuasiveness of Metaphor: A Replication and Extension.
PUB DATE Nov 80
NOTE 28p.: Paper presented at the Annual Meeting of the Speech Communication Association (66th, New York, NY, November 13-16, 1980).

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Communication Research: Language Research: *Language Styles: *Metaphors: *Persuasive Discourse: Secondary Education: Speech Communication: *Speech Skills

ABSTRACT

A study was conducted to replicate and extend an earlier investigation of the persuasive effects of extended, intense concluding sex and death metaphors by using a more controlled design and by mixing metaphors. Fifty-eight high school students completed pretests assessing their attitudes toward a speech topic (legalization of marijuana). Two weeks later, the subjects were randomly assigned to one of four groups and asked to participate in a critical listening experiment in which they heard one of four versions of a tape-recorded speech. The body of each speech contained the same antilegalization of marijuana arguments. However, each contained a different conclusion: a sex metaphor, a death metaphor, a mixed sex/death metaphor, and a nonmetaphorical conclusion. After listening to the speeches, the subjects completed posttest measures assessing their attitudes toward the topic. The results indicated that the extended sex metaphorical conclusion induced greater attitude change in the direction advocated in the speech than did the other conclusions. Three possible explanations for this result are: the conclusion (1) provided the best culmination of the arguments presented in the speech, (2) interacted powerfully and believably with the speech topic, and (3) psychologically aroused and motivated the subjects to action via fear. The results provided evidence for the contention that metaphor functions differently than other forms of intense language. (Author/FL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED194934

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

The Persuasiveness of Metaphor: A Replication and Extension

Susan A. Siltanen
Department of Communication
The Ohio State University
205 Derby Hall
154 N. Oval Mall
Columbus, Ohio 43210
614-422-3400

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Susan A. Siltanen

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Presented at The Speech Communication Association Annual Meeting in New York City, November 16, 1980. Ms. Siltanen is a doctoral candidate and wishes to thank Dr. Keith Jensen and Dr. Lawrence Hosman for their assistance with this paper.

CS503137

The Persuasiveness of Metaphor:
A Replication and Extension

Although there has been a recent resurgence of interest and research in metaphor, philosophers, literary critics, and rhetoricians have speculated and theorized about the function of metaphor in discourse for centuries.[1] Following Aristotle, most 18th and 19th century scholars argued that metaphor was merely an "ornamental element of style."[2] More recently, however, scholars have attributed greater power to metaphor. In a recent survey of secondary and elementary school textbooks, for example, Arter reported a high incidence of metaphor and concluded that understanding and interpreting metaphors are "fundamental and basic to the learning process."[3] Moreover, Black's theory of an interaction metaphor which functions to create new concepts, suggests that metaphor plays an important role in creative thinking in any discipline.[4] Expanding this position, Hawes,[5] Ortony,[6] Black,[7] Kuhn,[8] Boyd,[9] Petrie,[10] Schon,[11] Reddy,[12] and Levin[13] have argued that metaphor is fundamental and critical to the development and creation of new theories, new ideas, general learning, language acquisition, and paradigmatic shifts in science. Pepper[14]

has even argued that the "root metaphor" that individuals and disciplines assume determines their "world view." That is, the root metaphor determines the meaningful categories into which individuals and disciplines place their perceptions and experiences.[15]

This hypothesized creative dimension of metaphor has influenced rhetoricians also. They have theorized about the potential persuasive effects of metaphor. For example, Fearing,[16] and Osborn and Ehninger[17] have argued that metaphor increases the persuasive power of a message. That is, they contend that by including metaphors in speeches, speakers will "change people's attitudes more" because metaphors appeal to the senses, enliven the discourse, and make it easier to attend to the arguments of the message.[18] Fearing argued:

> The extraordinary evocative capacity of metaphor makes the study of its use especially important in a society as concerned as ours is with all forms of persuasion...Metaphor taps many levels of reality and because of its direct relations to perceptions...it has the unique power to move people, to bind them together, or to force them apart.[19]

Traditionally, then, speakers have included metaphors in their speeches and as Bowers and Osborn have noted, especially in the conclusions. They wrote:

> This belief in the strength of metaphor is especially evident in the conclusions of speeches. There, the speaker frequently develops a bold metaphor as a culmination of the attitude and argument contained in the body of the address.[20]

Supporting this assertion, Bowers and Osborn cited several notable persuasive speeches which concluded with bold metaphors, e.g., Demosthenes' "On The Crown," Cicero's "First Oration Against Cataline," Bryan's "Cross of Gold," and Roosevelt's "First Inaugural Address."[21] Another more recent use of a bold metaphor is President Carter's "energy speech" which employed an extended war metaphor.[22] The intuitive theoretical position that bold concluding

metaphors enhance the persuasiveness of a speech accrues some support, then, from their high frequency in historically effective speeches. However, as numerous scholars have argued, such intuitive theories and practices should be verified empirically.[23]

Despite this recognized need for empirical validation, to date only three studies have tested the persuasive power of metaphor. Specifically, Bowers,[24] Bowers and Osborn,[25] and Reinsch[26] have investigated the intensity of metaphors in general, the persuasiveness of sex and death metaphors, and similes versus metaphors, respectively.

Bowers investigated metaphor under the rubric "language intensity." Defining language intensity as "The quality of language which indicates the degree to which the speaker's attitude toward a concept deviates from neutrality,"[27] Bowers hypothesized that there were four primary correlates of language intensity: obscurity of terms, number of syllables, presence of qualifiers, and metaphorical quality of the terms. Bowers prepared four argumentative messages in which all the words and phrases which expressed the communicator's attitude toward the concept were replaced with numbered blanks. In a separate booklet alternative words or phrases were supplied for each blank and the intensity for each term was rated by groups of sixteen or more judges. Asserting that a word was used metaphorically when "the conventional denotation of the term was transferred or altered in the context of the communication,"[28] Bowers found that metaphorical quality correlated highly with langage intensity ($r=.83$).[29] Additionally, Bowers was able to subclassify two types of metaphors on the basis of their conventional referents. The first subtype, labeled the "sex metaphor," included all terms generally associated with the practice of and traffic in the sex act and related events. The second subtype, labeled

the "death metaphor," included all terms whose usual associations are death, decomposition, and the afterlife. Furthermore, the "sex metaphor" and "death metaphor" subtypes were rated higher in intensity than the other metaphors ($r=1.00$).[30]

In sum, Bowers' results provided evidence for the theoretical position that audiences perceive metaphorical language as intense and powerful. However, because audiences perceive metaphorical language as more powerful and intense than non-metaphorical language, it does not necessarily follow that such language facilitates or increases persuasion or attitude change.

Consequently, Bowers and Osborn investigated the attitudinal effects of sex and death concluding metaphors. Defining metaphor as Osborn and Ehninger did previously,[31] Bowers and Osborn hypothesized that sex and death metaphorical conclusions would "differ significantly in their effects on attitude change toward the main concept of persuasive speeches and that these metaphorical conclusions would also differ significantly from the non-metaphorical conclusions in the audience's judgment of the speaker's credibility."[32]

Bowers and Osborn used two tape-recorded persuasive speeches, each having an intense and extended metaphorical conclusion and a literal conclusion. By "extended metaphor" they referred to a series of words pertaining to the type of metaphor, which were positioned sporatically throughout the concluding paragraph. For example, the extended sex metaphor contained such words as: seductive, rape, prostitution, impotent, abortion, seducers, ill-advised parental restrictions, lie side by side, a new birth of hope, and a new manhood. Their results confirmed the prediction that sex and death extended metaphorical conclusions would bring about more "attitude change in the direction advocated than would the literal conclusions."[33] The second prediction regarding the

speaker's credibility was only partially supported. That is, the only significant dimension of the speaker's credibility that was enhanced by the metaphorical language was the "ingenuity" dimension.

Bowers and Osborn offered three explanations for their results pertaining to attitude change: (1) metaphors have effects different from other kinds of intense language; (2) high language intensity, whether metaphorical or not, is more effective than less intense language when it occurs in the conclusions of speeches; and (3) possibly the two variables interact; the effect of metaphor is different from the effect of other kinds of intense language and this difference is enhanced by a late position in persuasive speeches.[34]

In a similar study, Reinsch compared the persuasiveness of metaphors and similes. He hypothesized that the inclusion of similes in a persuasive message would increase its persuasiveness and would also increase the audience's perception of the source's credibility.[35] Additionally, he predicted that substituting metaphors for the similes would further increase the message's persuasiveness and the source's credibility.[36] A persuasive message about the use of wiretapping by law enforcement agencies was the stimulus material. A "literal" message, in which figurative language was minimized, was prepared. Then twelve comparisons were generated which could be used as either similes or metaphors. After screening the comparisons, four were selected: (1) wiretapping is (like) a one-way window; (2) suspicion is (like) quicksand; (3) the phone is (like) a confession box; and (4) the problem is (like) a polluted lake. Intense, extended sex and death metaphors or similes were not employed in this study. A significant difference in attitude change between the literal and the metaphorical messages was identified; however, the metaphors did not produce significantly greater

attitude change than the similes. The credibility prediction was not supported. Reinsch's results were consistent with Bowers and Osborn's findings that metaphorical conclusions produce more attitude change than non-metaphorical conclusions. However, since the credibility hypotheses in both studies were not supported, as Reinsch concluded, we still do not understand why metaphors have such persuasive effects.

In sum, Bowers' study on langauge intensity supported the notion that metaphorical quality is a correlate of language intensity and that two metaphorical subtypes, i.e., "sex metaphor" and "death metaphor," correlated highly with language intensity.

Bowers and Osborn's study provided some initial evidence that the use of metaphorical conclusions produced more attitude change than non-metaphorical conclusions. Similarly, Reinsch's study provided evidence that the inclusion of metaphors in a message increased its persuasiveness as measured by attitude change scores. However, these studies do not provide definitive conclusions and explanations about the persuasiveness of metaphor.

Rationale

A closer examination of these studies reveals some methodological problems which confound a clear interpretation of their results and suggest the need for replication. Specifically, three intervening variables which were not controlled in the studies are: (1) the degree of favorableness toward the speech topics; (2) the saliency of the speech topics for the subjects; and (3) the interaction of type of concluding metaphor with the arguments in the body of the speeches. Also Bowers and Osborn did not control for potential delivery effects.

Although Bowers and Osborn claimed that "care was taken to avoid strong differences in delivery," they used different speakers and as they acknowledge, one speaker's delivery could have been better or worse than the other's.[37] Accordingly, delivery could have interacted with the speech topic, arguments in the speech, and/or the extended concluding metaphor. Reinsch controlled delivery by having the same speaker tape record all versions of the speech.

More importantly, however, neither Reinsch nor Bowers and Osborn measured the subjects amount of favorableness toward the speech topic. That is, while the researchers knew that the subjects were generally favorable toward the speech topics, they did not know whether the subjects were more favorable toward one topic than the other. It is possible, then, that Bowers and Osborn's subjects were more favorable toward "government aid to students" than they were toward "protective tarrifs" although they were generally favorable toward both topics. Thus, as Bowers and Osborn noted, the speaker opposing the more favorable topic, i.e., "government aid to students," could have encountered "stronger incongruity" than the speaker opposing "protective tarrifs."[38]

Furthermore, neither Reinsch nor Bowers and Osborn measured the saliency of the speech topics for their subjects. That is, the researchers did not evaluate how important the speech topic was for the subjects. For example, Bowers and Osborn's subjects may have considered the "government aid to students" a more important topic than "protective tarrifs." Similarly, Reinsch's subjects may not have considered "wiretapping by government officials" very important, thus, evoking attitude change may have been easier. Saliency of the speech topic appears crucially linked to the potential attitude change demonstrated by a subject. That is, if a topic is important to a person,

he/she may be more reluctant to change his/her attitude or vice versa. If a topic is relatively unsalient to subjects, changing attitudes may be easier. Accordingly, the subjects' perceived saliency of the speech topics may have interacted with the metaphors in facilitating the measured attitude change. Controlling the amount of favorableness and the saliency of the speech topics would permit a clearer interpretation of the persuasive effects of metaphors.

Another important source of interpretation confusion involves the arguments presented in the body of the speeches. Reinsch does not include any discussion of the types of arguments used or of a possible interaction between the arguments and the metaphors used. Bowers and Osborn, however, acknowledge that their two speeches used different arguments which may have confounded their results.[39] That is, Bowers and Osborn admit that the arguments could have interacted with the speech topic and that their design could not permit them to evaluate such an interaction.

Reinsch, and Bowers and Osborn, however, appear to have overlooked a second important potential interaction between the arguments used in the text of the speech and the concluding metaphor. That is, as Bowers and Osborn stated in their introduction, theoretically a concluding metaphor facilitates persuasion because it is a culmination or economic statement of the arguments developed in the body of the speech. This interaction is crucial to the persuasive power of metaphor. If a concluding metaphor does not capture the essence of the preceding arguments, it will probably not facilitate persuasion. Accordingly, carefully controlling the relationship between the arguments and the concluding metaphors appears essential.

In summary, the lack of control of the intervening variables of saliency of speech topic, argument interaction with concluding metaphor, and delivery

differences casts serious doubt on the generalizability of Reinsch's and Bowers and Osborn's results. In order to investigate the persuasiveness of concluding metaphors, the above intervening variables must be systematically controlled in the design. Accordingly, the purpose of this study is to clarify our understanding of the persuasiveness of concluding metaphors by replicating Bowers and Osborn's study controlling the intervening variables discussed above. The first two hypotheses tested were:

H1: An extended sex metaphorical conclusion will be more effective in producing attitude change than a non-metaphorical conclusion.

H2: An extended death metaphorical conclusion will be more effective in producing attitude change than a non-metaphorical conclusion.

Moreover, this study attempts to extend our understanding of the persuasiveness of concluding metaphors by testing the effectiveness of a combined sex-death concluding metaphor. For years, instructors have cautioned students not to "mix metaphors" because the audience would react negatively. However, to my knowledge, that dictum has not been empirically validated. Additionally, consistent with Bowers' rationale in the language intensity study, a mixed sex-death metaphor should increase the intensity of the metaphorical conclusion and either bring about more attitude change or possibly boomerang like other overly intense language.[40] The third hypothesis tested, therefore, was:

H3: An extended combined sex-death metaphorical conclusion will be more effective in producing attitude change than an extended sex metaphorical conclusion, an extended death metaphorical conclusion, or a non-metaphorical conclusion.

Method

Message Construction. The topic for the speech was determined in a pilot study. Students were asked to rank order five of the most interesting and important speech topics. Topics which might confound the results of the study because they were related directly to sex or death, e.g., "legalization of prostitution" or "abortion," were deleted. The three most popular speech topics were: (1) Equal Rights Amendment, (2) Marijuana Laws, and (3) Control of Nuclear Power. Since it was deemed necessary to employ a salient speech topic in the study, these three topics were then evaluated by other speech classes using semantic differential scales.

On the basis of this evaluation an antilegalization of marijuana topic was used for the body of the speech. The same body was used in all four speeches. Thus, all four versions of the speech contained the same arguments in the body.

Four different conclusions were prepared: three metaphorical and one non-metaphorical. The three extended metaphors were a "sex metaphor," a "death metaphor," and a "sex-death" metaphor. For purposes of this study, an "extended metaphor" was operationalized as Bowers and Osborn had done previously.[41] The non-metaphorical conclusion was void of the verbal units identified for the extended metaphors and other figurative language.[42] The four conclusions are presented below.

ANTI-LEGALIZATION OF MARIJUANA SPEECH

Literal Conclusion

To argue that marijuana is no worse than alcohol is obviously absurd. Both are extremely dangerous drugs that offer potential for escape. Scholarly research shows that marijuana may be considerably more dangerous than alcohol; it can induce severe brain malfunctions and depress sexual arousal with over-use. And what about the effects of using marijuana and alcohol together? Karen Ann Quinlin is in a coma because she combined alcohol and drugs. Bogg reports that 95% of the people who identify themselves as "smokers' also drink alcoholic beverages; thus, combining stimulants is a common practice.

The opposition usually responds, "The studies you cite investigated the use of marijuana by chronic smokers, not social once-a-week smokers." But by legalizing marijuana we would be ignoring our moral code. Such a practice might well tempt the tobacco smokers to try marijuana and develop a chronic smoking pattern. Is the momentary "high" worth the risk? Haven't we deprived ourselves out of natural good health with other legal vices such as tobacco and alcohol? Our present system, despite its weaknesses, still maintains considerable control over the drug problem. Shall we relinquish control and invite certain disaster?

ANTI-LEGALIZATION OF MARIJUANA SPEECH

Extended Sex Metaphorical Conclusion

To argue that marijuana is no worse than alcohol is to argue that rape is no worse than intercourse. Both are seductive stimulants that offer potential for erotic escape, but both are dangerous. Scholarly research shows that marijuana may be considerably more dangerous than alcohol; it can screw-up brain functions and depress sexual arousal with over-use. And what about the effects of using marijuana and alcohol together? Karen Ann Quinlin is in a coma because of promiscuous use of alcohol and drugs. Bogg reports that 95% of the people who identify themselves as "smokers" also drink alcoholic beverages; thus, combining stimulants is a common practice.

The opposition usually responds, "The studies you cite investigated the use of marijuana by chronic smokers, not social once-a-week smokers." But by legalizing marijuana we would be prostituting our moral code. Such a practice might well seduce the tobacco smokers to try marijuana and develop a chronic smoking pattern. Is the erotic "high" from marijuana worth the risk? Haven't we screwed ourselves out of natural good health with other legal vices such as tobacco and alcohol? Legalizing marijuana would be legalizing rape. Our present legal system, despite its weaknesses, still contains and controls the embryo of drug abuse. Shall we sever the umbilical cord and set free a monster?

ANTI-LEGALIZATION OF MARIJUANA SPEECH

Extended Death Metaphorical Conclusion

To argue that marijuana is no worse than alcohol is to argue that premeditated homicide is no worse than accidental homicide. Both are deadly stimulants that offer potential for escape, but both are dangerous. Scholarly research shows that marijuana may be considerably more dangerous. Scholarly research shows that marijuana may be considerably more dangerous than alcohol; it can alter brain functions and depress sexual arousal with over-use. And what about the possibly lethal effects of using marijuana and alcohol together? Karen Ann Quinlin is in a coma because she mixed a death potion: alcohol and drugs. Bogg reports that 95% of the people who identify themselves as "smokers" also drink alcoholic beverages; thus, combining stimulants is a common practice.

The opposition usually responds, "The studies you cite investigated the use of marijuana by chronic smokers not social once-a-week smokers." But by legalizing marijuana we would be destroying our moral code and inviting the kiss of death. Such a practice might well tempt the tobacco smokers to try the death weed marijuana and develop a cancerous and chronic smoking pattern. Is the "high" from marijuana worth the risk? Haven't we fatally deprived ourselves of natural good health with other legal vices such as alcohol and tobacco? Legalizing the death weed marijuana would be legalizing suicide. Our present legal system despite its weaknesses, still maintains considerable control over the drug problem. Shall we, by relinquishing this control, release a time bomb that will lead ultimately to our annihilation?

ANTI-LEGALIZATION OF MARIJUANA SPEECH

Extended Sex/Death Metaphorical Conclusion

To argue that marijuana is no worse than alcohol is to argue that murder is no worse than rape. Both are deadly stimulants that offer potential for erotic escape; but both are dangerous. Scholarly research shows that marijuana may be considerably more dangerous than alcohol; it can screw-up brain functions and depress sexual arousal with over-use. And what about the effects of using marijuana and alcohol together? Karen Ann Quinlin is in a coma because of promiscuous use of alcohol and drugs. Bogg reports that 95% of the people who identify themselves as "smokers" also drink lcoholic beverages; thus, combining stimulant is a common practice.

The opposition usually responds, "The studies you cite investigated the use of marijuana by chronic smokers, not social once-a-week smokers." But by legalizing marijuana we would be prostituting our moral code, and inviting the kiss of death. Such a practice might well seduce the tobacco smokers to try marijuana and develop a chronic smoking pattern. Is the "high" from the death weed worth the risk? Haven't we deprived ourselves of natural good health with other legal vices such as tobacco and alcohol? Legalizing marijuana would be legalizing suicide. Our present legal system, despite its weaknesses, still maintains considerable control over the drug problem. Shall we, by relinquishing this control, release a time bomb that will ultimately lead to our annihilation?

After listening to the four conclusions, a separate group of subjects evaluated the metaphoricalness of the conclusions. The results were subjected to a one-way repeated measures analysis of variance ($F = 39.03; df = 3,69; p < .001$).[43]

Subjects. The subjects were 58 students enrolled in a large metropolitan high school and were randomly assigned to the experimental conditions.

Procedure. Two weeks prior to the administration of the experimental treatments, subjects completed four seven-interval Likert-type scales assessing their attitude toward the topic of the message. These scales have been used by Burgoon.[44] Two weeks later the subjects were asked to participate in a critical listening experiment. They listened to one of four tape-recorded speeches and then completed four seven-interval Likert-type items assessing their post-test attitudes toward the topic.[45]

Data Analysis. The pre- and post-test scales were separately submitted to factor analysis. Each factor analysis produced a one-factor solution, the results of which were used to produce factor scores. These factors scores were used in all subsequent analyses. As a reliability check, Cronbach's Alpha was computed for the pre- and post-test measures. The resultant reliabilies were .91 and.92.

The data were cast into a 2 (no sex metaphor/sex metaphor) X 2 (no death metaphor/death metaphor) analysis of covariance design which has been used by Burgoon.It has been demonstrated to be more appropriate and more sensitive means of analyzing attitude-change data than is

analysis of difference scores. The pre-test measure of attitudes served as the covariate in the analysis.

RESULTS

The results revealed a significant main effect for sex metaphor ($F=6.70$; $df=1.53$; $p<.01$).

The percent of variance accounted for was 4.6%. No other effects were statistically significant. The means for the sex metaphor effect indicated that subjects' post-test attitudes changed more toward the position advocated in the speech when it contained a concluding sex metaphor ($\bar{X}= -.56$). than when it did not ($\bar{X}=0.67$) contain a concluding sex metaphor. Thus, hypothesis one was supported while hypotheses two and three were not.

DISCUSSION

The results of this study appear to extend our understanding of the persuasiveness of metaphor and its relationship to langauge intensity. This discussion will focus on three issues: (1) the general relationship between metaphor and language intensity; (2) the theoretical explanations of why concluding metaphors facilitate persuasion; and (3) the generalizability of these results to all concluding metaphors.

Metaphor and Language Intensity. The results of this study support Bowers and Osborn's assertion that the persuasive effects of metaphor are different from those of other kinds of intense language. Bowers and Osborn based their assertion on the fact that no "boomerang effect" was observed. That is, neither speech produced attitude change in the opposite direction by using overly intense language. Overly intense language has been shown

to boomerang. Since the combined sex-death concluding metaphor used in this study did not induce the boomerang effect, these results provide additional support for Bowers and Osborn's assertion.

Theoretical Explanations. In the two previous investigations of the persuasiveness of metaphor enhancement of speaker credibility was predicted as the primary reason that extended concluding metaphors would increase attitude change. That is, Reinsch, and Bowers and Osborn predicted that upon hearing the extended intense concluding metaphors the listeners would attribute some or perhaps more of a specific correlate of credibility to the speaker, e.g., trustworthiness, authoritativeness, and ingenuity or creativity. Perceiving the speaker to be highly credible, the listeners would then change their attitudes toward the topic to be more consistent with those advocated by the speaker. However, the results of those studies did not support this theoretically grounded prediction. If an extended concluding metaphor does not specifically enhance the speaker's credibility, why/how then, does inclusion of extended metaphorical conclusion facilitate persuasion?

This study suggested some alternative explanations for the observed attitude change induced by the extended concluding metaphors. The subjects in this study were told that this was a "critical listening" experiment and that their job was to analyze the speech critically. Accordingly, the speaker on the tape was not provided any credibility labels because the task focused more on analyzing the arguments in the speech than the qualifications of the speaker.

Given this format, there appear to be at least three viable explanations of the persuasiveness of the concluding sex metaphor. Two plausible alternative explanations derive from a Freudian interpretation. First, Freud maintained

that sex and death are two of the most primal motivating forces in human beings with sex being a more powerful motivator than death.[47] Accordingly, the extended concluding sex metaphor may have motivated the listeners to change their attitudes more than the other metaphorical and non-metaphorical conclusions. Additionally Freud argued that sex and death are also the more feared of human experiences.[48] So it is possible that the sex concluding metaphor functioned persuasively because it aroused fear in the subjects which in turn motivated them to change their attitudes.

Secondly, following Freud, it is possible that the "sex" appeals were generally more salient to the subjects ($\bar{X}$ age = 17) than the death appeals. Accordingly, being a more salient appeal and a powerful motivator could have accounted for the persuasiveness of the concluding sex metaphor. Additionally, if the death appeals were not as salient as the sex appeals, the death appeals may have had a dampening effect when combined with the sex appeals.

Thirdly and most importantly, the subjects may have perceived the concluding sex metaphor as a better culmination or economic statement of the arguments developed in the text of the speech than the non-metaphorical conclusion or the other metaphorical conclusions. That is, the concluding sex metaphor interacted with the arguments developed in the speech in such a way as to be perceived as a more powerful, believable culmination of the arguments. Since the same speech topic and arguments were used with the other conclusions, such an interaction did not appear to occur with those conclusions. This explanation is consistent with Bowers and Osborn's rationale.

Moreover, it is possible that if the concluding sex metaphor best represented a culmination of the arguments presented in the text of the speech and if sex was both a salient appeal and a powerful motivator for the

subjects, these three factors may have interacted. Thus, the persuasiveness of the concluding sex metaphor was not a function of one of these factors but all three combined.

In summary, the results of this study suggested that increased credibility via the extended concluding metaphors may not be the most fruitful theoretical explanation for the observed persuasive effects of concluding sex metaphors. Rather, three alternative explanations which are theoretically supported appear more viable: (1) sex was a primal motivating force for these subjects; (2) sex was a more salient appeal for these subjects; and (3) the concluding sex metaphor interacted powerfully and believably with the arguments presented in the text of the speech. Finally, it was concluded that these three factors probably interacted in producing the observed persuasiveness of the concluding sex metaphor.

Generalizability of Results. The generalizability of these results, to all concluding metaphors or even to other concluding sex and death metaphors, is the most critical issue in this discussion. Although this study did not commit what Clark has called the "language-as-fixed-effect fallacy," generalizing the results of this study to a population of "concluding metaphors" or "sex, death, and sex-death concluding metaphors" is not possible.[49] As the preceding analysis suggested, the observed persuasiveness of the concluding sex metaphor was most probably a function of a three way interaction: the arguments in the text, the concluding sex metaphor, and the saliency of the sex metaphor for the subjects. Accordingly, it is not possible to assert that using any concluding metaphor or even the same concluding sex metaphor with different arguments and subjects would produce the same results. Likewise, it is equally probable that by better manipulating the relationships

between the arguments in the text and the saliency of the metaphor for the subjects, the concluding death metaphor or sex-death metaphor might be equally effective in eliciting attitude change. In conclusion, these results can not be generalized beyond this study.

SUMMARY

This study sought to replicate and extend Bowers and Osborn's investigation of the persuasive effects of extended intense concluding sex and death metaphors by using a more controlled design and by mixing metaphors. The results suggested that the sex metaphorical conclusion induced greater attitude change in the direction advocated in the speech than did the non-metaphorical conclusion, the death metaphorical conclusion, or the combined sex-death metaphorical conclusion. These results provided additional evidence for Bowers and Osborn's claim that extended concluding metaphors function differently from other forms of intense language in that they did not demonstrate a boomerang effect. The persuasiveness of the concluding sex metaphor was interpreted in Freudian terms as more persuasive because it psychologically motivated the audience to action via fear. The persuasiveness was also interpreted in terms of Bowers and Osborn's argument that the extended concluding sex metaphor provided the best culmination of the arguments presented in the speech. Finally, it was suggested that the persuasiveness of the concluding sex metaphor in this study could be best understood as function of an interaction of both explanations.

FOOTNOTES

[1]For an excellent survey of recent theoretical and empirical research on metaphor see, Andrew Ortony, Ralph Reynolds, and Judith Arter, "Metaphor: Theoretical and Empirical Research," Psychological Bulletin 85 (1978) 919-943. See also: Richard Billow, "A Cognitive Developmental Study of Metaphor Comprehension." Developmental Psychology 11 (1975): 415-423. Michael Cometa and Morris Eason, "Logical Operations and Metaphor Interpretation: A Piagetian Model." Child Development 49 (1978): 649-659. For an entire issue of a journal devoted to metaphor see: Critical Inquiry 5 (1978). Thomas Frentz, "Toward a Resolution of the Genrative Semantics/Classical Theory and Controversy: A Psycholinguistic Analysis of Metaphor." Quarterly Journal of Speech 60 (1974): 125-133. Paul N. Campbell, "Metaphor and Linguistic Theory." Quarterly Journal of Speech 61 (1975): 1-12. Robert Sanders, "Aspects of Figurative Language." Linguistics 96 (1973): 56-100. Andrew Ortony, ed. Metaphor and Thought. New York: Cambridge University Press: 1979.

For some historical writings see: Aristotle, The Rhetoric and the Poetics of Aristotle. Translated by W. Rhys Roberts and Ingram Bywater. New York: The Modern Library, 1954. Max Black, Models and Metaphors, Ithaca: Cornell University Press, 1962. Michael Osborn and Douglas Ehninger, "The Metaphor in Public Address." Speech Monographs. 29 (1962): 223-243. For an extensive historical account see: Warren Shibles, Metaphor: An Annotated Bibliography and History. Whitewater: The Language Press, 1971. Cicero, De Oratore, III xxxvii-xliii et passim, Translated H. Rackham (Cambridge, Mass., 1942). Quintilian Institutio Oratoria, III, viii, translated, H. E. Butler (Cambridge, Mass., 1922). Richard Sherry, Treatise of Schemes and Tropes, 1550. Henry Peacham, The Garden of Eloquence, 1577. John Hoslins, Directions

for Speech and Style, 1599. Henry Home, Lord Kames, Elements of Criticism, ed. Abraham Mills (New York, 1845). George Campbell, The Philosophy of Rhetoric, ed. Lloyd Bitzer (Carbondale, Ill., 1963). Hugh Blair, Lectures on Rhetoric and Belles Lettres (Philadelphia, 1864). Herbert Read, English Prose Style (New York, 1928). June E. Downey, "The Psychology of Figures of Speech," The American Journal of Psychology, XXX (1919): 103-115. Ruth Herschberger, "The Structure of Metaphor," Kenyon Review, V (1943): 433-442.

[2]Aristotle, The Rhetorics and Poetics of Aristotle, trans. W. Rhys Roberts and Ingram Bywater (New York: The Modern Library, 1954), p. 1410B.

[3]Judith Arter, "The Effects of Metaphor on Reading Comprehension." Unpublished doctoral dissertation. University of Illinois at Urbana-Champaign, 1976.

[4]Max Black, Models and Metaphors (Ithaca, Cornell University Press,1962).

[5]Leonard Hawes, Pragmatics of Analoguing: Theory and Model Construction in Communication.(Reading, Massachusetts: Addision Wesley Publishing Company, 1975).

[6]Andrew Ortony, "Metaphor: A Multidimensional Problem," in Metaphor and Thought, ed. Andrew Ortony (New York·Cambridge University Press, 1979).

[7]Max Black, "More About Metaphor," in Metaphor and Thought, ed. Andrew Ortony (New York: Cambridge University Press, 1979).

[8]Thomas Kuhn, "Metaphor in Science," in Metaphor and Thought, ed. Andrew Ortony (New York: Cambridge University Press, 1979).

[9]Richard Boyd, "Metaphor and Theory Change: What is 'Metaphor' a Metaphor For?" in Metaphor and Thought, ed. Andrew Ortony (New York: Cambridge University Press, 1979).

[10] Hugh Petrie, "Metaphor and Learning," in Metaphor and Thought, ed. Andrew Ortony (New York: Cambridge University Press, 1979).

[11] Donald Schon, "Generative Metaphor: A Perspective on Problem-Setting in Social Policy," in Metaphor and Thought (New York: Cambridge University Press, 1979).

[12] Michael Reddy, "The Conduit Metaphor - A Case of Frame Conflict," in Metaphor and Thought, ed. Andrew Ortony (New York: Cambridge University Press, 1979).

[13] Samuel Levin, "Standard Approaches to Metaphor and a Proposal for Literary Metaphor," Metaphor and Thought, ed. Andrew Ortony (New York: Cambridge University Press, 1979).

[14] Stephen Pepper, World Hypotheses (Berkley: University of California Press, 1942).

[15] Pepper.

[16] Franklin Fearing, "The Problem of Metaphor," Southern Speech Journal 29 (1963): 47-55.

[17] Michael Osborn and Douglas Ehninger, "The Metaphor in Public Address," Speech Monographs, 29 (1962): 259.

[18] John W. Bowers and Michael Osborn, "The Attitudinal Effects of Selected Types of Concluding Metaphors in Persuasive Speeches," Speech Monographs, 33 (1966): 147-155.

[19] Fearing, p. 47.

[20] Bowers and Osborn, p. 147.

[21] Bowers and Osborn, p. 147. For additional examples see Bowers and Osborn, pp. 147-148.

[22]*It is interesting to note that an extended metaphor was used by* President Roosevelt.

[23]Many Speech Communication scholars have advocated such a claim. For example, see: Charles Woolbert, "Research in Public Speaking," Quarterly Journal of Speech, 1 (1915): 17-23.

[24]John W. Bowers, "Some Correlates of Language Intensity," Quarterly Journal of Speech 50 (1964): 416-420.

[25]John W. Bowers and Michael Osborn, "Attitudinal Effects of Selected Types of Concluding Metaphors in Persuasive Speeches," Speech Monographs, 33 (1966): 147-155.

[26]N. Lamar Reinsch, Jr., "An Investigation of the Effects of the Metaphor and Simile in Persuasive Discourse," Speech Monographs, 38 (1971): 142-145.

[27]Bowers, p. 417.

[28]Bowers, p. 420.

[29]Bowers, p. 420

[30]Bowers, p. 420.

[31] Osborn and Ehninger, , p. 261.

[32]Bowers and Osborn, p. 149.

[33]Bowers and Osborn, p. 151.

[34]Bowers and Osborn, p. 153.

[35]Reinsch, p. 143.

[36]Reinsch, p. 143.

[37]Bowers and Osborn, p. 153.

[38]Bowers and Osborn, p. 153.

[39]Bowers and Osborn, p. 153.

[40]Bowers, "Some Correlates of Language Intensity."

[41]Bowers and Osborn, p. 149.

[42] The three metaphorical conclusions conatined an equal number of metaphorical terms: 13 per concluding paragraph. In addition, the non-metaphorical conclusion contained an equal number of substitue words.

[43] The means of the four conclusions were: Literal $\bar{X}$= 4.25; Sex $\bar{X}$= 9.21; Death $\bar{X}$= 8.58; and the Sex/Death $\bar{X}$= 8.21.

[44]Michael Burgoon, Stephen Jones, and Diane Steward, "Toward A Message-Centered Theory of Persuasion: Three Empirical Investigations of Language Intensity," Human Communication Research, 1 (1975): 240-256.

[45]The delivery was controlled by having one spekaer tape the body of the speech and the four conclusions at one taping session. Duplications of the body of the speech were then made and the various conclusions were then spliced onto the tapes. The author wishes to thank Dr. Ted Wendt for his assistance.

[46]Burgoon, Jones, and Stewart, experiment number 1. For additional evidence supporting the use of analysis of covariance see: Carl Bereiter,"Some Persisting Dilemmas In The Measurement of Change." In Problems In Measuring Change p. 3-20. Chester W. Harris,Ed.

(Madison, Wisconsin, University of Wisconsin Press, 1963). See also, Frederic Lord, "Elementary Models For Measuring Change," in Problems in Measuring Change. Chester Harris, Ed. (Madison, Wisconsin, University of Wisconsin Press, 1963).

[47] Sigmund Freud, The Standard Edition of the Complete Psychological Works of Sigmund Freud. Translated by James Strachey. (London: Hogarth Press, 1966).

[48] Freud, 1966.

[49] For a detailed discussion of the "language-as-fixed-effect-fallacy" see Herbert Clark, "The Language-As-Fixed Fallacy:A Critique of Language Statistics in Psychological Research," Journal of Verbal Learning and Verbal Behavior 4 (1973):335-359. For a discussion and analysis of Clark's article see Edward Wike and James Church, "Comments on Clark's 'The Language-As-Fixed-Effect-Fallacy'" Journal of Verbal Learning and Verbal Behavior 3 (1976):249-256. This study controlled for the fixed effect fallacy by using an alternative method described by Wike and Church.